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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,510

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Sigeru Torii

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EXAMINER

MANOHARAN, VIRGINIA

ART UNIT

PAPER NUMBER

1771

MAIL DATE

DELIVERY MODE

10/13/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,510	Applicant(s) TORII ET AL.	
	Examiner Virginia Manoharan	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 24-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). Claim 24 step (c) , as recited, is ambiguous , i.e., separating the first gas when the third gas which is the mixture of the second gas and additional vaporized liquid medium is the one fed into the condensing means

b). It is unclear what gas is being referred to at page 5, second line from the bottom of claim 27, i.e., whether referring to the first, second or third gas.

c). The claimed “portion”, numerously recited in the claims, is not a positive recitation of a device, nor is it a recitation of a structural element of an apparatus claim. See e.g., claim 29.

d). The process steps languages and the functional languages in a system or apparatus claims make the actual structure vague and the true structural limitations for apparatus claims, difficult to determine. What structure, for example, allows the gas to be blown into the mixture containing the liquid medium to vaporize as recited e.g., in claim 27. See also claim 28. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. [It is noteworthy that the means for language is authorized by 35 U.S.C. 112, 6th paragraph].

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-26/24 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 55-102401 with or without JP abstract 2000-185201 or Rajakovics et al (4,043,875).

JP '401 is applied for the same reasons as set forth at page 5, first full paragraph of the previous Office action. The two steps vaporization is deemed to be a matter of additive, i.e., adding to the known singular vaporization step taught by JP '401, a two steps vaporization as now recited in claim 24, step (b). Nonetheless, JP '201 or Rajakovics teaches the known more than one step of vaporization in a plurality of evaporators. See the abstracts. To combine the references would have been obvious to one of ordinary skill in the art inasmuch as all the references are directed to the same processing environment, i.e., to a vaporization means and method.

Claims 25, 29 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 55-102401 with or without JP abstract 2000-185201 or Rajakovics et al (4,043,875) as applied to claims 24-26/24 and 27-29 above, and further in view of Neal et al (4,983,260) with or without Glover (3,607,662) or Theiler (2,095,578).

Neal is applied for the same reasons as set forth at the paragraph bridging pages 5 and 6 of the previous Office action. An artisan knows that when the temperature in Neal is given, pressure is imposed. Nonetheless, Glover or Theiler teaches that the claimed pressure regulating means as claimed is a known expediency in the art used for its art-recognized function. See e.g., col. 3, lines 8-61 of Glover; and page 3, lines

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25-75 through page 4, lines 1-17 of Theiler. To combine the references would have been obvious to one of ordinary skill in the art inasmuch as all the references are directed to the same processing environment, i.e., to a means and method with temperature and pressure control means.

Claims 32-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 55-102401 in view of Neal et al (4,983,260) as applied to claims 24-31 above, and further in view of Sussmeyer et al (4,584,062).

Sussmeyer is applied for the same reasons as set forth at page 6, second full paragraph of the previous Office action.

Claims 26/25 and 28 (recited more in terms of structure, i.e., reciting positively the double helical pipe and spiral pipe) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants' arguments filed July 29, 2010 have been fully considered but they are not persuasive.

Contrary to applicant's assertion the newly cited references supra, disclose the argued two step continuous vaporization; and the further argued regulation of the partial pressure of a vaporized liquid medium.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meszaros discloses a two stage vaporization.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Virginia Manoharan/
Primary Examiner, Art Unit 1797